IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) An information processing apparatus configured to serve as a reproduction instruction apparatus configured to transmit a data reproduction process request to a node connected to a network and to execute a data reproduction process based on return data, comprising:

a data transmission rate setting unit configured to select one or more data transmission modes as a return data transmission mode, from a plurality of data transmission modes, and to determine a data transmission rate of ~~each~~ the selected one or more data transmission modes ~~mode~~;

a packet generating unit configured to ~~perform a setting process for~~ set reproduction object data, and to set an address ~~setting process~~ in accordance with the data transmission rate determined by the data transmission rate setting unit, and to generate a data reproduction process request packet storing designation data for the set reproduction object data as a request statement; and

a network interface unit configured to transmit the data reproduction process request packet generated by the packet generating unit~~; and a rule judgment condition setting unit configured to set judgment data for judging whether the node executes a process satisfying a process request~~.

2. (Currently Amended) The information processing apparatus according to claim 1, wherein[[:]] the data transmission rate setting unit is configured to ~~set~~ select the one or more

data transmission ~~mode~~ modes in accordance with a demand level of the reproduction object

data ~~and determine the data transmission rate of each selected data transmission mode~~.

3. (Currently Amended) The information processing apparatus according to claim 1,

wherein the data transmission rate setting unit is configured to select the <u>one or more</u> data

transmission ~~mode including~~ <u>modes from</u> a carousel transmission mode, a chaining

transmission mode, a distributed cache mode<u>,</u> or a client server mode~~, and to determine the~~

~~data transmission rate of each selected mode~~.

4. (Currently Amended) The information processing apparatus according to claim 1,

wherein the data transmission rate setting unit is configured to have correspondence data

between a demand level of the reproduction object data and a band rate as the data

transmission rate of a selected data transmission mode, <u>and</u> to select the <u>one or more</u> data

transmission ~~mode~~ <u>modes</u> based upon demand level information of the reproduction object

data in accordance with the correspondence data~~, and to execute a process of determining the~~

~~data transmission rate of each selected mode~~.

5. (Previously Presented) The information processing apparatus according to claim 1,

wherein the data transmission rate setting unit is configured to execute a process of

determining the data transmission rate of each data transmission mode in accordance with a

value of a demand level x determined by demand information by adopting a function group y

$= Dn(x)$ (where $\Sigma Dn(x) = 1$) set by the demand level x, a band rate y for each transmission

mode, and an identification value n of each data transmission mode.

3

6. (Currently Amended) The information processing apparatus according to claim 1, wherein the data transmission rate setting unit is configured to ~~execute a process of setting~~ select a carousel transmission mode as the ~~selected~~ return data transmission mode, [[if]] when a demand level of the reproduction object data is higher than a preset threshold value.

7. (Previously Presented) The information processing apparatus according to claim 1, further comprising:

a data recovery processing unit configured to execute a deinterleave process and an FEC decoding process,

wherein the data recovery processing unit is configured to execute the deinterleave process and the FEC decoding process for the reproduction object data extracted from packets received from the node to recover data.

8. (Currently Amended) The information processing apparatus according to claim 1, further comprising:

a rule judgment condition setting unit configured to set judgment data for judging whether the node executes a process satisfying a process request, wherein

the packet generating unit is configured to generate the data reproduction process request packet, the data reproduction process request packet storing the judgment data set by the rule judgment condition setting unit ~~and the designation data for the reproduction object data~~.

4

9. (Currently Amended) The information processing apparatus according to claim 8, wherein

the rule judgment condition setting unit is configured to execute a process of setting a probability value β as a reproduction rule judgment condition statement for judging whether the node executes the process satisfying the process request, and

~~wherein~~ the packet generating unit is configured to generate a packet storing the probability value β as the reproduction rule judgment condition statement.

10. (Currently Amended) The information processing apparatus according to claim 8, wherein

the reproduction object data stored at the node is encoded data at an encoding rate of q/p converted from <u>a number of blocks</u> p ~~blocks~~ of divided data into <u>a number of blocks</u> q ~~blocks~~ by FEC encoding, and

the rule judgment condition setting unit is configured to set a probability value ß indicating that the node returns data at a return probability ß, ~~the probability value ß being set in such a way that the relation between a number of return blocks q × α × n × ß calculated from~~ <u>such that ß is greater than p / (q × α × n), where</u> (1) <u>α is</u> a record probability [[α]] designated by a record instruction apparatus connected to the network, (2) <u>q is</u> the number of encoded blocks q, (3) <u>n is</u> a number of network-connected nodes [[n]], and (4) <u>p is</u> the number of blocks p~~, satisfies a condition that the number of return blocks q × α × n × ß is greater than the number of blocks p~~.

11. (Currently Amended) An information processing apparatus configured to serve as a demand information provider apparatus configured to provide demand level information of transmission data over a network, comprising:

a communication unit configured to transmit data to and to receive data ~~to and~~ from a network-connected node; and

a control unit configured to count a number of demand level information acquisition requests received from the network-connected node via the communication unit, ~~and~~ to generate demand level information for each transmission data in accordance with the count, to generate response information corresponding to each demand level information acquisition request in accordance with the generated demand level information, ~~and~~ to transmit the response information via the communication unit, and to include, in a carousel transmission process request, carousel transmission destination address information set in accordance with transmission source node address information of the received demand level information acquisition request, ~~wherein the network-connected node is configured to set judgment data for judging whether a request for transmission data is executed based on the demand level information~~.

12. (Currently Amended) The information processing apparatus according to claim 11, wherein the control unit is configured to execute transmission control of [[a]] the carousel transmission process request for data corresponding to a demand level equal to or larger than a threshold value, relative to a carousel transmission execution node when the demand level for each data based upon the count becomes equal to or larger than a preset threshold value.

13. (Currently Amended) The information processing apparatus according to claim 12, wherein the control unit is configured to ~~execute a process of storing~~ include an identifier of carousel transmission execution object data ~~and carousel transmission destination address information set in accordance with transmission source node address information~~ of the received demand level information acquisition request, in the carousel transmission process request.

14. (Currently Amended) An information processing method for a reproduction instruction apparatus for transmitting a data reproduction process request to a node connected to a network and executing a data reproduction process based on return data, comprising:

a ~~data transmission rate setting step of~~ selecting one or more data transmission modes as a return data transmission mode, from a plurality of data transmission modes, and determining a data transmission rate of each selected data transmission mode;

a ~~packet generating step of performing a~~ setting ~~process for~~ reproduction object data and an address ~~setting process~~ in accordance with the data transmission rate ~~determined by the data transmission rate setting step~~, and generating a data reproduction process request packet storing designation data for the set reproduction object data as a request statement; and

a ~~packet transmission step for~~ transmitting the packet generated by the packet generating step~~; and~~

~~a rule judgment condition setting step of setting judgment data for judging whether the node executes a process satisfying a process request.~~

7

15. (Currently Amended) The information processing method according to claim 14, wherein the ~~data transmission rate setting~~ selecting step includes setting the data transmission mode in accordance with a demand level of the reproduction object data ~~and determining the data transmission rate of each selected data transmission mode~~.

16. (Currently Amended) The information processing method according to claim 14, wherein the ~~data transmission rate setting~~ selecting step includes selecting the one or more data transmission ~~mode including~~ modes from a carousel transmission mode, a chaining transmission mode, a distributed cache mode, or a client server mode~~, and determining the data transmission rate of each selected mode~~.

17. (Currently Amended) The information processing method according to claim 14, wherein the ~~data transmission rate setting~~ selecting step includes selecting the data transmission mode based upon demand level information of the reproduction object data and determining the data transmission rate of each selected mode, in accordance with correspondence data between a demand level of the reproduction object data and a band rate as the data transmission rate of a selected data transmission mode.

18. (Currently Amended) The information processing method according to claim 14, wherein the ~~data transmission rate setting~~ selecting step includes determining the data transmission rate of each data transmission mode in accordance with a value of a demand level x determined by demand information by adopting a function group $y = Dn(x)$ (where $\Sigma Dn (x) = 1$) set by the demand level x, a band rate y for each transmission mode, and an identification value n of each data transmission mode.

19. (Currently Amended) The information processing method according to claim 14, wherein the ~~data transmission rate setting~~ selecting step includes ~~setting~~ selecting a carousel transmission mode as the ~~selected~~ return data transmission mode [[if]] when a demand level of the reproduction object data is higher than a preset threshold value.

20. (Currently Amended) The information processing method according to claim 14, further comprising:

~~a data recovery processing step of~~ executing a deinterleave process and an FEC decoding process, wherein

the ~~data recovery processing~~ executing step includes executing the deinterleave process and the FEC decoding process for the reproduction object data extracted from packets received from the node to recover data.

21. (Currently Amended) The information processing method according to claim 14, further comprising

setting judgment data for judging whether the node executes a process satisfying a process request, wherein

~~the packet generating step generates~~ the data reproduction process request packet storing includes the judgment data ~~set by the rule judgment condition setting step and the designation data for the reproduction object data~~.

22. (Currently Amended) The information processing method according to claim 21, wherein

the ~~rule judgment condition~~ setting <u>judgment data step</u> ~~is configured to execute a process of~~ <u>includes</u> setting a probability value ß as a reproduction rule judgment condition statement for judging whether the node executes the process satisfying the process request, <u>and</u>

~~wherein~~ the ~~packet generating~~ <u>setting reproduction object data</u> step <u>includes</u> <u>generating</u> ~~generates~~ a packet storing the probability value ß as the reproduction rule judgment condition statement.

23. (Currently Amended) The information processing method according to claim 21, wherein

the reproduction object data stored at the node is encoded data at an encoding rate of q/p converted from <u>a number of blocks</u> p ~~blocks~~ of divided data into <u>a number of blocks</u> q ~~blocks~~ by FEC encoding, and

the ~~rule judgment condition~~ setting <u>judgment data</u> step <u>includes setting</u> ~~sets~~ a probability value ß indicating that the node returns data at a return probability ß, ~~and the probability value ß set in such a way that the relation, between a number of return blocks q × α × n × ß calculated from~~ <u>such that ß is greater than p / (q × α × n), where (1)</u> α <u>is</u> a record probability [[α]] designated by a record instruction apparatus connected to the network, <u>(2) q is</u> the number of encoded blocks q, <u>(3) n is</u> a number of network-connected nodes [[n]], and <u>(4) p is</u> the number of blocks p~~, satisfies the number of return blocks q × α × n × ß is greater than the number of blocks p~~.

24. (Currently Amended) An information processing method for a demand information provider apparatus configured to provide demand level information of transmission data over a network, the method comprising:

receiving a demand level information acquisition request from a network-connected node via a communication unit;

counting a number of demand level information acquisition requests and generating demand level information for each <u>transmission</u> data in accordance with the count;

generating a packet storing the demand level information based on the count as response information and transmitting the packet via the communication unit; and

<u>storing, in a carousel transmission process request, carousel transmission destination</u> <u>address information set in accordance with transmission source node address information of</u> <u>the received demand level information acquisition request</u>setting judgment data for judging whether a request for transmission data is executed based on the demand level information.[[.]]

25. (Currently Amended) The information processing method according to claim 24, further comprising:

executing transmission control of [[a]] <u>the</u> carousel transmission process request for data corresponding to a demand level equal to or larger than a threshold value, relative to a carousel transmission execution node when the demand level for each data based upon the count becomes equal to or larger than a preset threshold value.

11

26. (Currently Amended) The information processing method according to claim 25, further comprising:

~~executing a process of~~ storing an identifier of carousel transmission execution object data ~~and carousel transmission destination address information set in accordance with transmission source node address information~~ of the received demand level information acquisition request, in the carousel transmission process request.

27. (Canceled).

28. (Canceled).